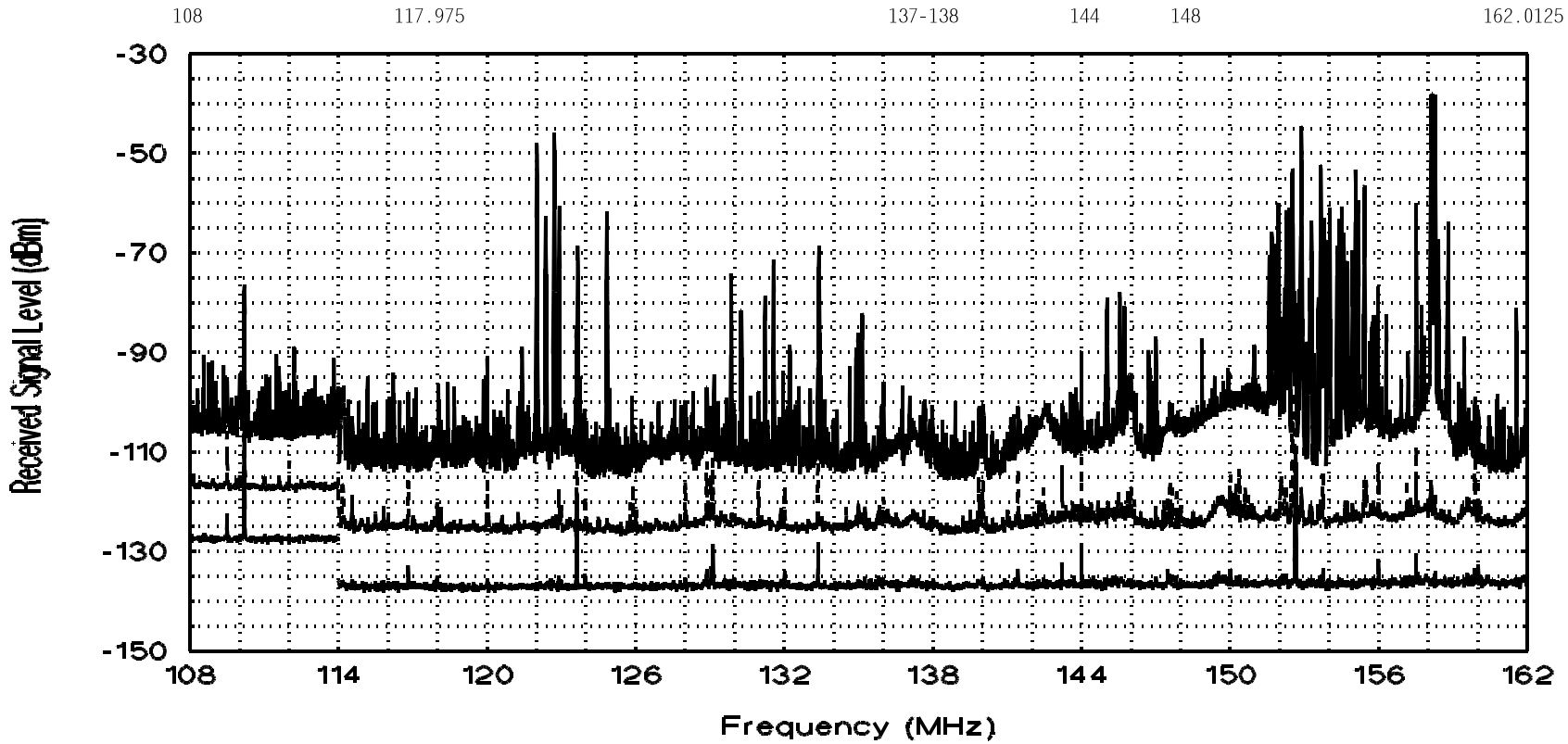
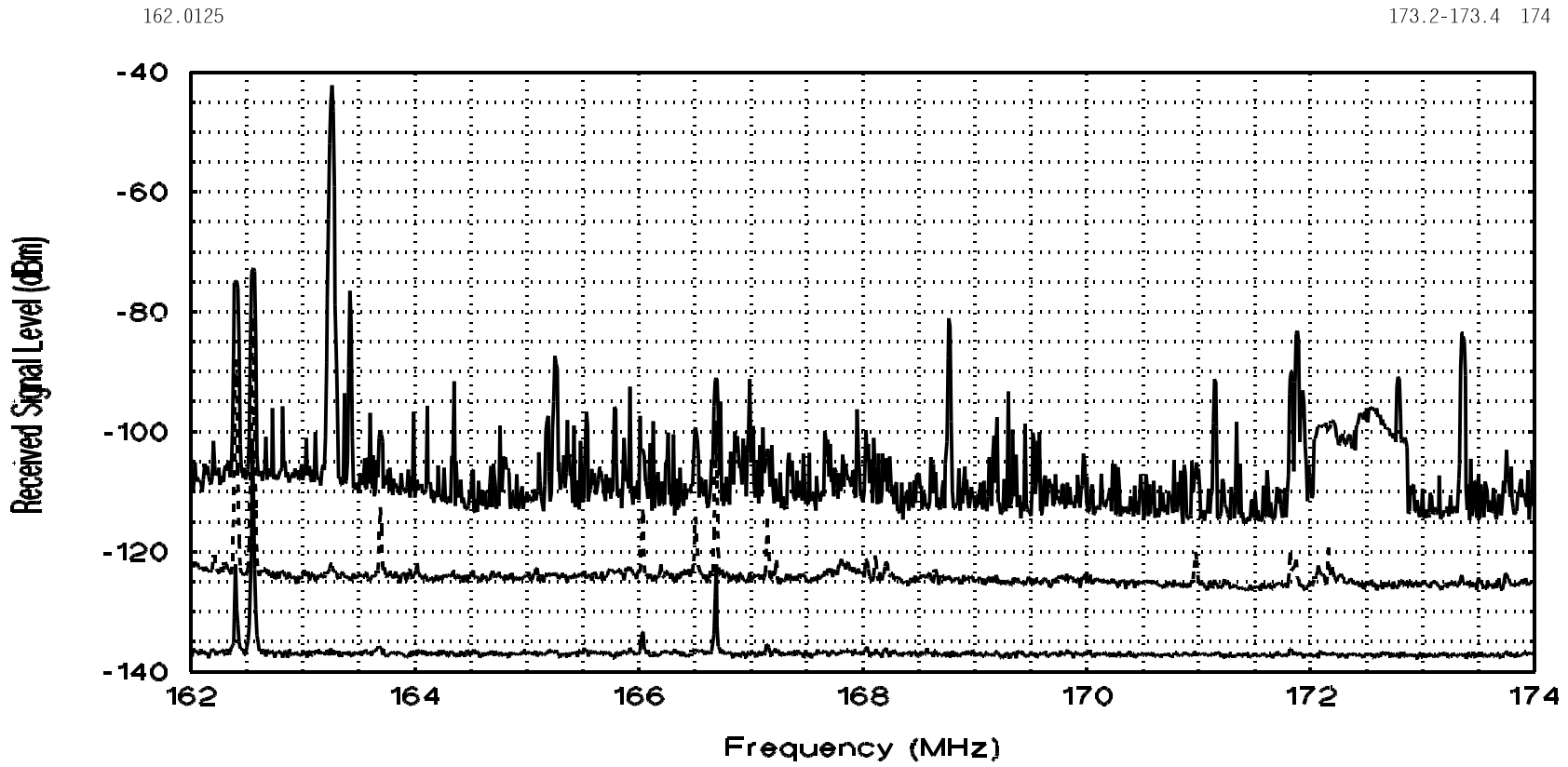
GOVERNMENT ALLOCATIONS:	AERONAUTICAL RADIONAVIGATION.	AERONAUTICAL MOBILE.	2	MOBILE, FIXED.		FIXED, MOBILE, MARITIME MOBILE, RADIONAVIGATION-SATELLITE, 5.	
NON-GOVERNMENT ALLOCATIONS:	AERONAUTICAL RADIONAVIGATION.	AERONAUTICAL MOBILE.	2		AMATEUR, 4.	LAND MOBILE, MARITIME MOBILE, RADIONAVIGATION-SATELLITE, 6.	
GENERAL UTILIZATION:	VHF Omnidirectional Range (VOR).	Air Traffic Control (ATC), ground control and aeronautical advisories, 1.	2	Non-tactical military, 3.		LMR, TIROS, TRANSIT-SAT, Maritime communications, 7.	



1. 121.9375-123.0875 MHz: private aircraft. 123.1 MHz: SAR (search and rescue) operations.
2. SPACE OPERATION/RESEARCH, METEOROLOGICAL/MOBILE-SATELLITE, Mobile-Satellite. Space-to-Earth; government use includes TIROS downlinks.
3. 143.75 MHz, 143.9 MHz: Civil Air Patrol.
4. 144-146 MHz: AMATEUR-SATELLITE.
5. 148-150.05 MHz: MOBILE-SATELLITE (Earth-to-space).
6. FIXED, MOBILE, MOBILE-SATELLITE (Earth-to-space).
7. Land transportation, domestic public, industrial, public safety, etc.

Figure B-1. NTIA spectrum survey graph summarizing 1,700 sweeps across the 108-162 MHz range (System-1, band event 11, swept/m3 algorithm, sample detector, 10-kHz bandwidth) at Eureka, CA, 1995.

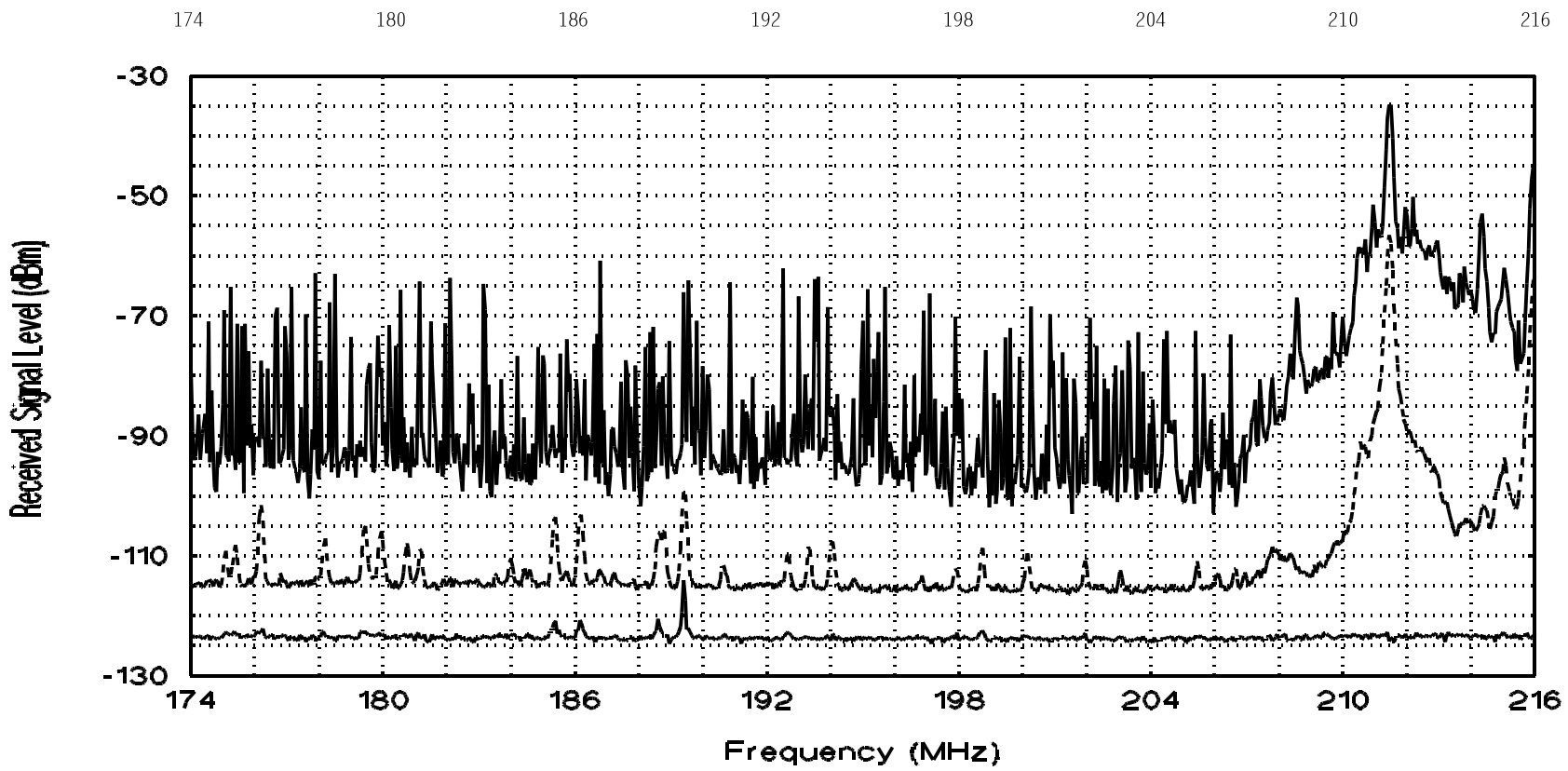
GOVERNMENT ALLOCATIONS:	FIXED, MOBILE		3.	
NON-GOVERNMENT ALLOCATIONS:		1.		
GENERAL UTILIZATION:	Land Mobile Radio (LMR) including weather radio, public safety, and law enforcement.	2.		



1. FIXED, Land Mobile.
2. Industrial, public safety.
3. FIXED, MOBILE.

Figure B-2. NTIA spectrum survey graph summarizing 9,000 sweeps across the 162-174 MHz range (System-1, band event 12, swept/m3 algorithm, sample detector, 10-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:							
NON-GOVERNMENT ALLOCATIONS:	BROADCASTING (television broadcasting). 1. 2.						
GENERAL UTILIZATION:	Channel 7	Channel 8	Channel 9	Channel 10	Channel 11	Channel 12	Channel 13

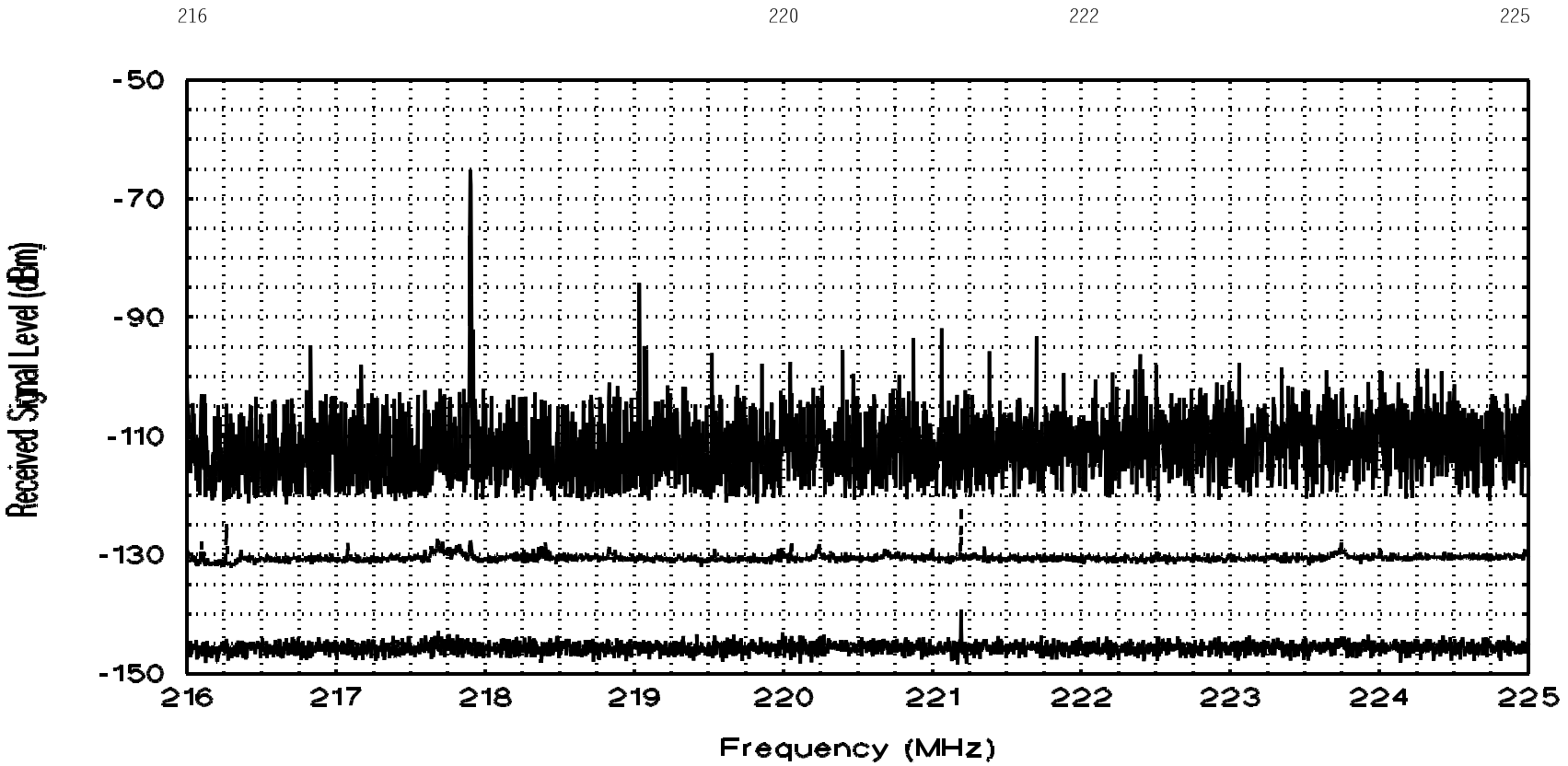


1. Subscription television services and limited wireless microphone operations are also permitted in this band.

2. TV broadcast licencees are permitted to use subcarriers on a secondary basis for both broadcast and non-broadcast purposes.

Figure B-3. NTIA spectrum survey graph summarizing 7,000 sweeps across the 174-216 MHz range (System-1, band event 13, swept/m3 algorithm, sample detector, 100-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:	MARITIME MOBILE, Radiolocation, Fixed, Aeronautical Mobile, 1, 2.	LAND MOBILE, Radiolocation, 1.	Radiolocation, 1.	
NON-GOVERNMENT ALLOCATIONS:	MARITIME MOBILE, Fixed, Radiolocation, Aeronautical Mobile, 2.	LAND MOBILE.	AMATEUR.	
GENERAL UTILIZATION:	Automated maritime telecommunications systems.	Trunked and conventional systems.	Amateur (1.25 meters).	



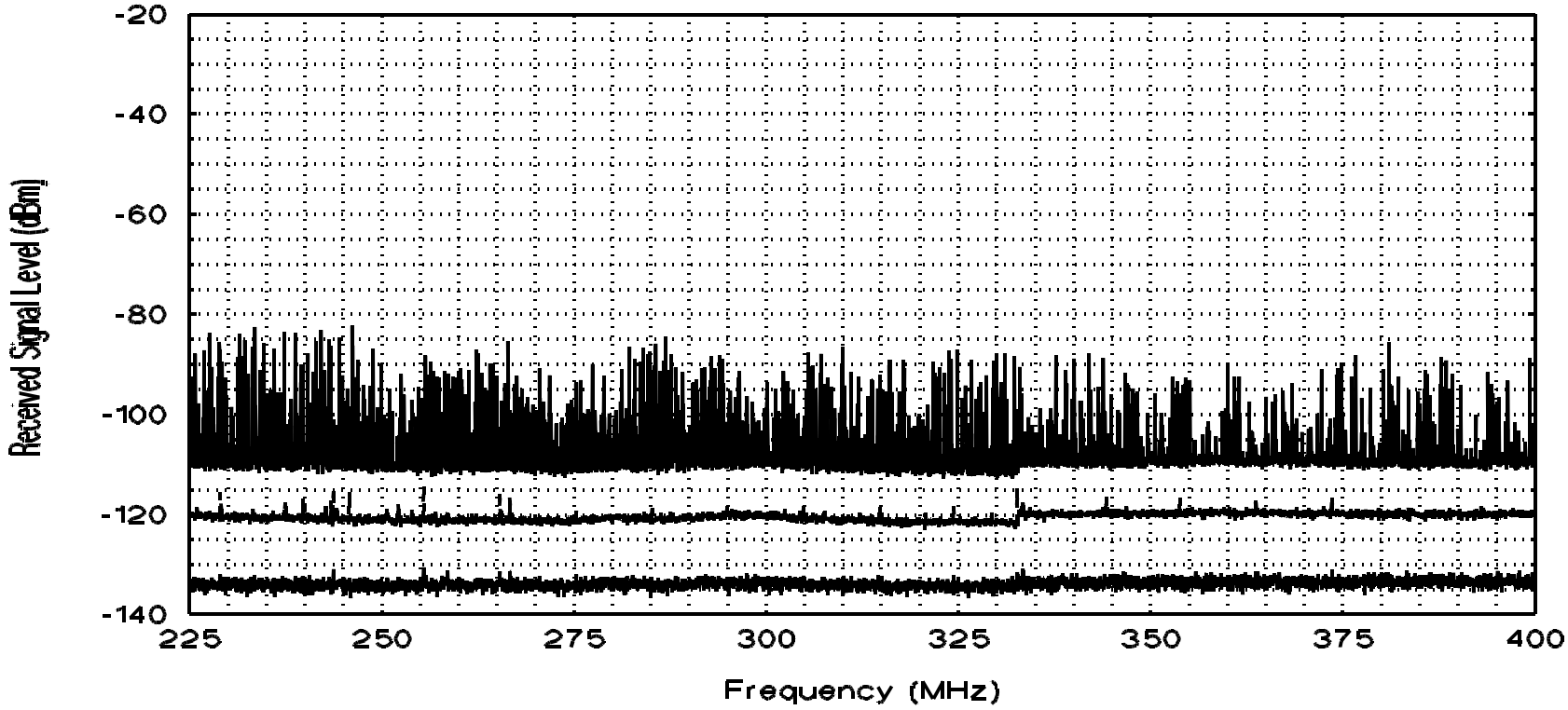
1. Radiolocation is limited to the military services.

2. Secondary services, other than radiolocation, are generally limited to telemetering and associated telecommand operations.

Figure B-4. NTIA spectrum survey graph summarizing 1,620 sweeps across the 216-225 MHz range (System-1, band event 14, swept/m3 algorithm, sample detector, 3-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:	FIXED, MOBILE, 1.	2.	FIXED, MOBILE, 3.	
NON-GOVERNMENT ALLOCATIONS:		2.	3.	
GENERAL UTILIZATION:	Military tactical and training communications including air traffic control (ATC).	2.		

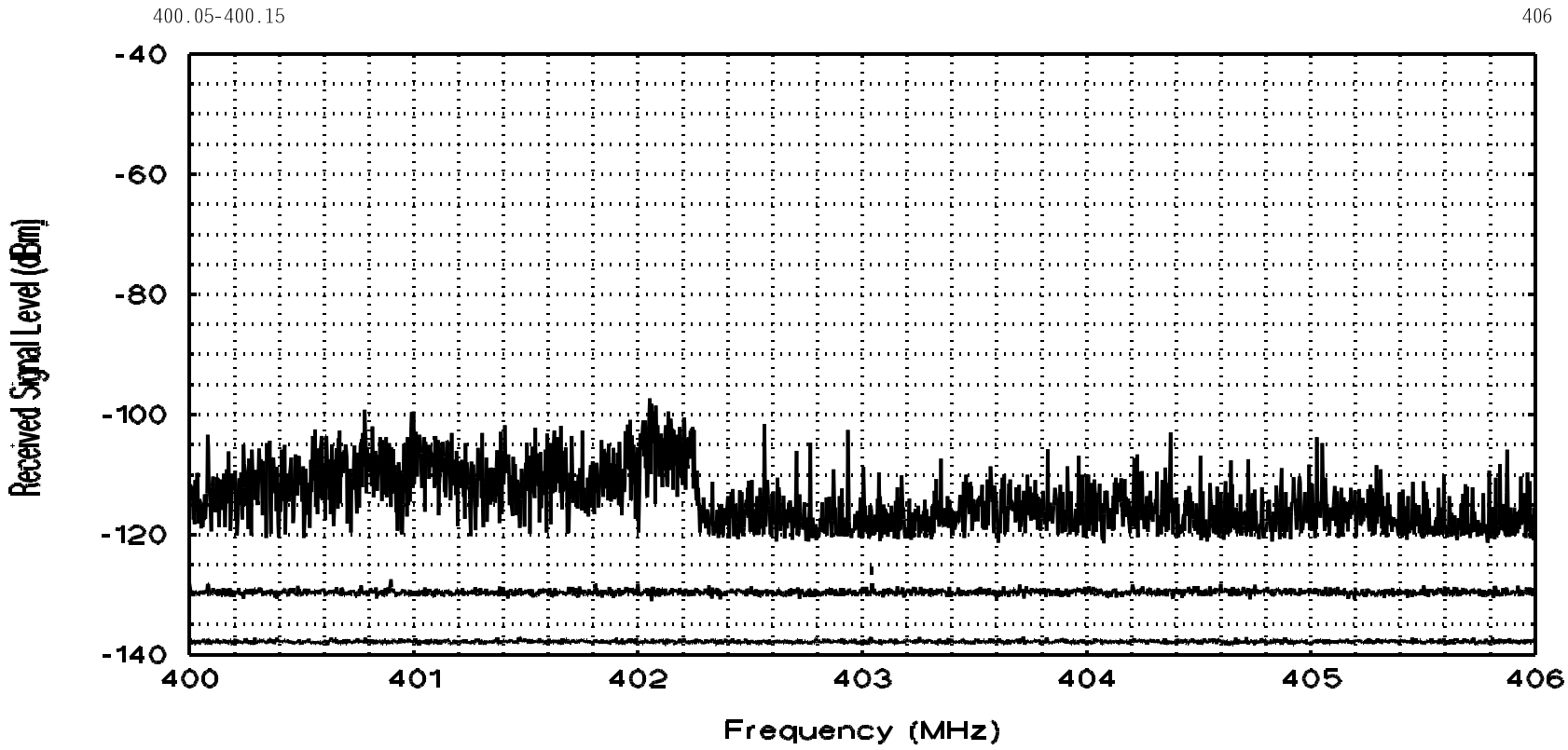
225 328.6-335.4 400.05



1. Government usage is limited to the military services; additionally, 235-322 MHz is allocated on a primary basis to the mobile-satellite service. 243.0 MHz may be used for search and rescue operations.
2. AERONAUTICAL RADIONAVIGATION, instrument landing systems (ILS) only.
3. 399.9-400.05 MHz: RADIONAVIGATION-SATELLITE.

Figure B-5. NTIA spectrum survey graph summarizing 1,300 sweeps across the 225-400 MHz range (System-1, band event 15, swept/m3 algorithm, sample detector, 30-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:	1.	METEOROLOGICAL AIDS (Radiosonde). 2. 3. 4. 5.
NON-GOVERNMENT ALLOCATIONS:	1.	METEOROLOGICAL AIDS (Radiosonde). 3. 4. 5.
GENERAL UTILIZATION:	1.	Meteorological radiosondes and satellites including GOES and TIROS-N.

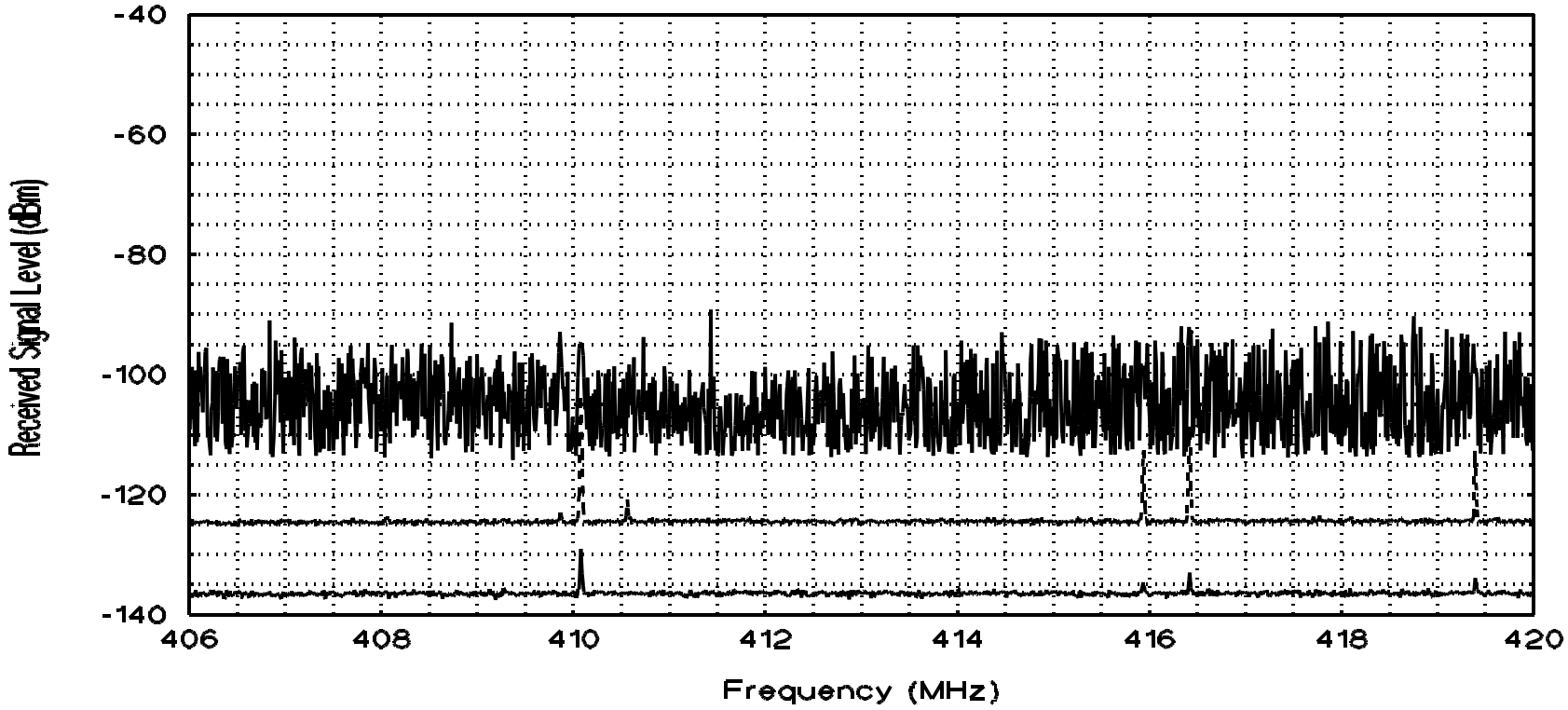


1. STANDARD FREQUENCY AND TIME SIGNAL-SATELLITE (400.1 MHz ±25 kHz).
2. 400.15-401 MHz: METEOROLOGICAL-SATELLITE (space-to-Earth).
3. 400.15-401 MHz: SPACE RESEARCH (space-to-Earth), Space Operation (space-to-Earth).
4. 401-402 MHz: SPACE OPERATION (space-to-Earth), Earth Exploration-Satellite (Earth-to-space), Meteorological-Sat. (Earth-to-space).
5. 402-403 MHz: Earth Exploration-Satellite (Earth-to-space), Meteorological-Satellite (Earth-to-space).

Figure B-6. NTIA spectrum survey graph summarizing 780 sweeps across the 400-406 MHz range (System-1, band event 16, swept/m3 algorithm, sample detector, 3-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:	1	RADIO ASTRONOMY, FIXED, MOBILE, 2.	FIXED, MOBILE, 2.
NON-GOVERNMENT ALLOCATIONS:	1	RADIO ASTRONOMY.	
GENERAL UTILIZATION:	1	LMR, 2.	LMR, 2.

406-406.1 410 420

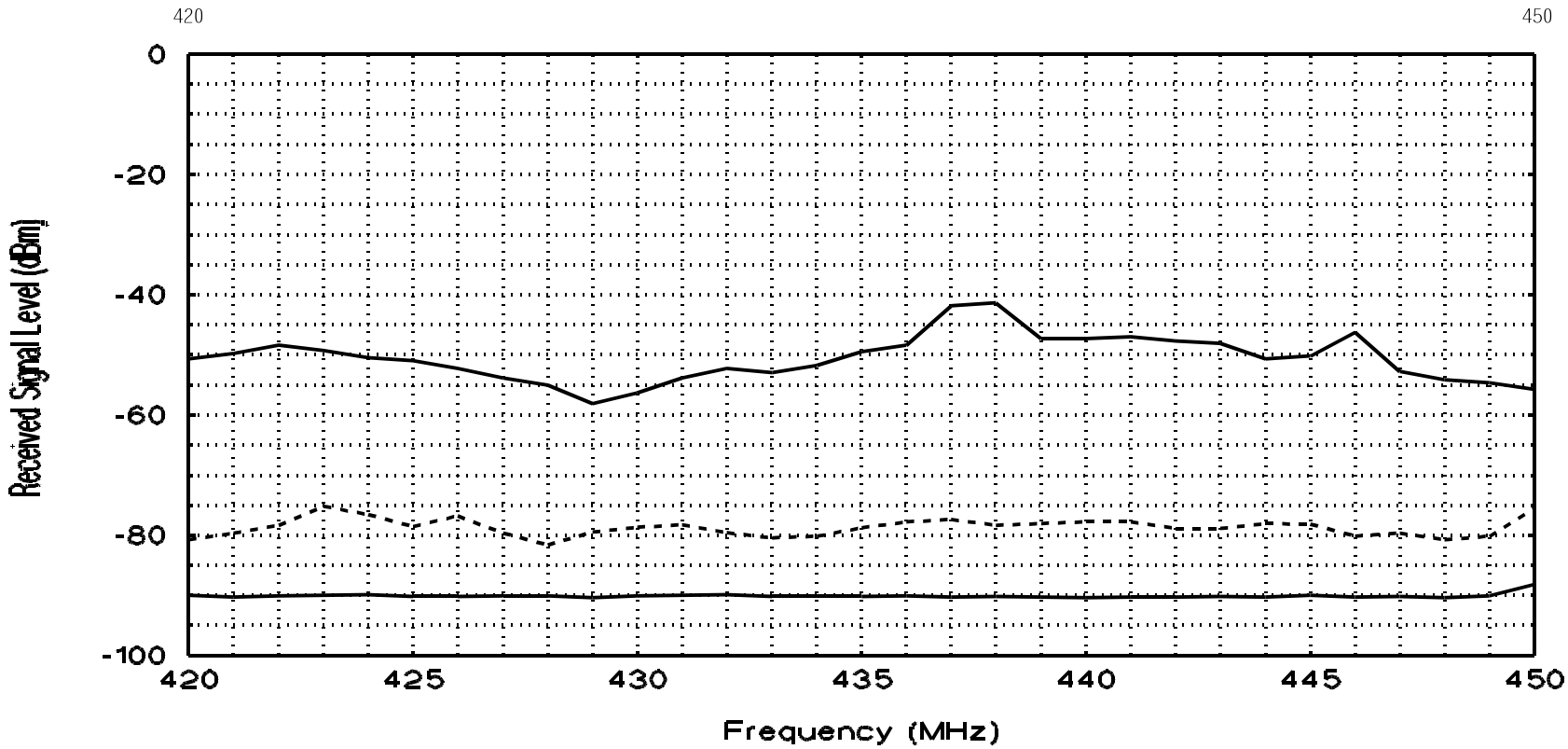


1. MOBILE-SATELLITE (Earth-to-space). Low power satellite emergency position-indicating radiobeacons (EPIRB) only. Supported by the joint U.S. SARSAT/-Soviet COSPAS satellite network.

2. Fixed and mobile services are allocated for Government non-military agencies. Military use may be authorized on a local-coordinated, secondary, non-interfering basis.

Figure B-7. NTIA spectrum survey graph summarizing 8,000 sweeps across the 406-420 MHz range (System-1, band event 17, swept/m3 algorithm, sample detector, 10-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:	RADIOLOCATION.
NON-GOVERNMENT ALLOCATIONS:	Amateur.
GENERAL UTILIZATION:	Long-range surveillance radars, 1, 2.

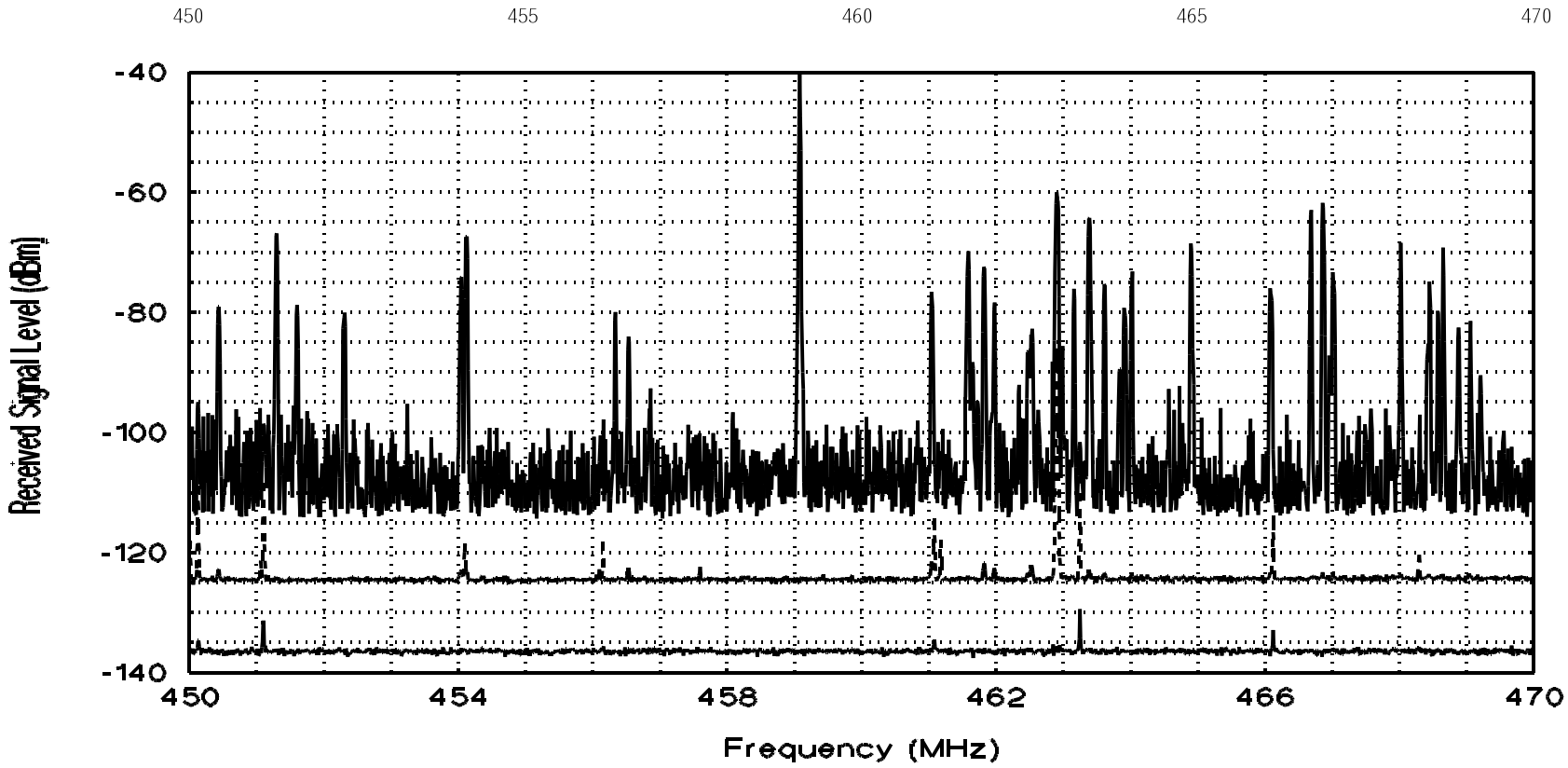


1. Radiolocation is limited to military services. Primarily, long-range radar systems essential to the Nation's early warning capability, law enforcement, and tracking objects in space. These systems use very high power and wide bandwidths. Low power radio control operations are permitted in the band. NASA and military use of telemetry and telecommand is also extensive.

2. There is some non-Government use of spread spectrum modes; also, amateur weak signal modes (432-433 MHz), television (420-432 & 438-444 MHz), repeaters (442-450 MHz), auxiliary links (433-435 MHz), and amateur satellite (435-438 MHz).

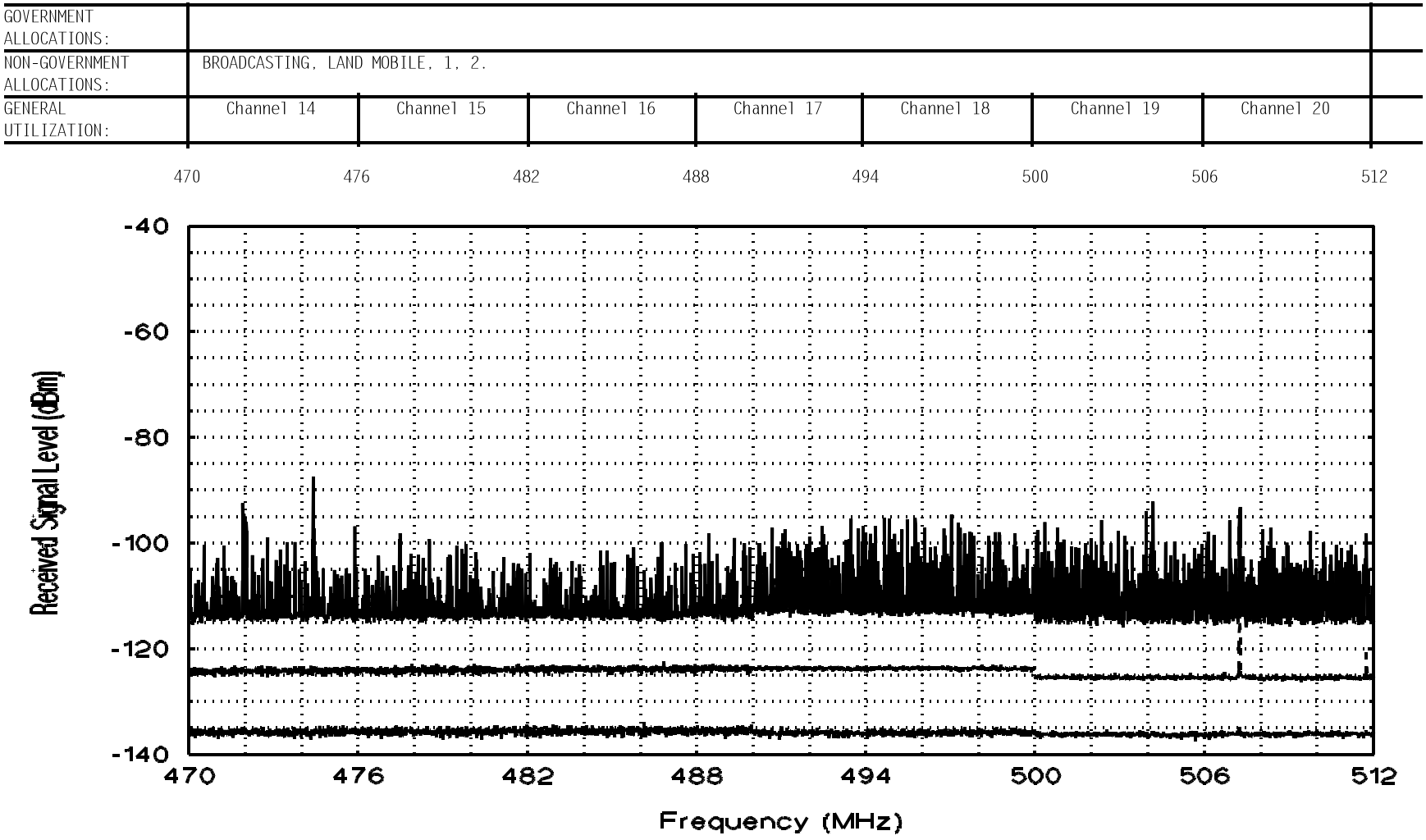
Figure B-8. NTIA spectrum survey graph summarizing 26 scans across the 420-450 MHz range (System-1, band event 18, stepped algorithm, +peak detector, 1000-kHz bandwidth) at Eureka, CA, 1995.

GOVERNMENT ALLOCATIONS:			Meteorological-Satellite (Space-to-Earth).	
NON-GOVERNMENT ALLOCATIONS:	LAND MOBILE.		LAND MOBILE.	
GENERAL UTILIZATION:	LMR, 1, 2, 3. (base or mobile)	LMR, 1, 2, 3. (mobile only)	LMR, 2, 4, 5. (base or mobile)	LMR, 2, 4, 5. (mobile only)



1. 450-451 MHz, 455-456 MHz: Remote pickup broadcast.
2. 451-454 MHz, 456-459 MHz, 460-462.5375 MHz, 462.7375-467.5375 MHz, 467.7375-470 MHz: Public Safety, Industrial, Land Transportation.
3. 454-455 MHz, 459-460 MHz: Domestic Public.
4. 462.5375-462.7375 MHz, 467.5375-467.7375 MHz: Personal.
5. 460-470 MHz: GOES and TIROS satellite downlinks.

Figure B-9. NTIA spectrum survey graph summarizing 7,800 sweeps across the 450-470 MHz range (System-1, band event 19, swept/m3 algorithm, sample detector, 10-kHz bandwidth) at Eureka, CA, 1995.



1. Land Mobile Radio Services include Public Safety, Domestic Public, Industrial, and Land Transportation assignments in specific urban areas.

2. The band is also allocated to the fixed service to permit subscription television operations.

Figure B-10. NTIA spectrum survey graph summarizing 1,400 sweeps across the 470-512 MHz range (System-1, band event 20, swept/m3 algorithm, sample detector, 10-kHz bandwidth) at Eureka, CA, 1995.